

REMARKS

The Examiner has rejected claims 1-17 under 35 U.S.C. 103(a) as being unpatentable over Benzel ('170) in view of Wilen ('237) and Saitta et al. ('776). The Examiner argues that the claimed invention would have been obvious in view of Benzel (FIG. 1), in view of Bonin, Jr. and Saitta.

To evaluate the pending claims it is important to understand the invention disclosed. Applicant's invention is a snorkel device to be utilized in swimming along the surface of water for exercise purposes to mix supplemented oxygen at a slow flow rate from a head mounted canister with a main supply of ambient air from a snorkel. It includes a headstrap 17 which mounts a small oxygen canister 40, by an attachment such as a strap 51 and connected in flow communication with the snorkel 23, such that as the swimmer swims along the surface and inhales ambient air, it will be supplemented by oxygen from the canister. This device provides a means for convenient and healthy exercise wherein a swimmer of modest athletic ability gains the advantage of the supplemental oxygen during his/her swimming exercise, as described at the bottom of page 14 of the specification. These features are brought out in the independent claims which call for a mounting strap, snorkel tube, oxygen containing canister connected to the strap and an oxygen supply tube for communicating supplemental oxygen from the canister to the snorkel. The device can thus be conveniently used by a swimmer seeking a short workout such as during a noon hour break or early evening break without the necessity of donning heavy harnesses and the like for carrying oxygen tanks and other paraphernalia typically associated with scuba diving.

By contrast the prior art relied on by the Examiner is directed to traditional large scuba oxygen tanks 23 (Benzel '170) at FIG. 1. His objective is to "enable the swimmer to breathe ambient air whenever possible, but to automatically supply him with

compressed air...whenever the supply of ambient air is cut off by the automatic action of the snorkel valve.” (Col 1, lines 19-22) To this end he states that he tank may be strapped to “the swimmers waist by means which are not shown,” column 2, lines 23-24. The snorkel includes a diaphragm 26, operable when above water and in equilibrium to maintain a tilt demand valve 30 closed thus preventing continuous supplemental flow of the oxygen from the tank strapped to the swimmers waist. Principally, the swimmer draws his/her oxygen from either the tank or the snorkel but only momentarily from the tank to be supplemented by air.

The Examiner recognizes that there may be certain times when “the demand regulator is underwater, he may breathe some ambient air in through the snorkel valve, but most of his inhaled air [gas] will come from the demand valve 30.” (Column 4, lines 5-7, emphasis added) This is neither the purpose nor function of Applicant's claimed device. It is noted Applicant's oxygen from the conveniently mountable canister is flowed as supplemental air to continually supplement the atmospheric air drawn in through the snorkel spout. The structure and operation of Applicant's claimed invention is totally contrary to Benzel's. Benzel's objective is to, when the swimmer is swimming along the surface with the snorkel exposed, utilize only atmospheric air, and when submerged, use only pressurized oxygen from the scuba tank mounted at his or her waist. For the moment in time when there might be both, most of the inhaled gas will come from the tank through its valve 30. To modify Benzel to incorporate a canister sufficiently small to be mountable to a head strap would totally defeat his purpose of seeking to submerge and rely only on an adequate supply of compressed oxygen to sustain a reasonably long dive.

There is no suggestion in the record of a motivation for combining Saitta and Benzel. Saitta is directed to a toxic chemical mask which seals hermetically about the user's face and which mounts a small canister of oxygen for selectively inflating a

pneumatic seal about the user's face and for selectively flushing the user's mask of toxic fumes. There is no indication of record as to how the combination would be made, i.e. what would be done with Benzel's valves 30, regulator 18, tank 23 or long oxygen supply line. To substitute the tiny canister of Saitta for the scuba style oxygen tank 23 of Benzel would be to defeat his purpose which seeks to enable the swimmer to submerge and breathe the total oxygen demand from the tank. There is no showing of record that the tiny canister 28 of Saitta would achieve this affect. Consequently, not only is there no suggestion of combining Saitta with Benzel but the teachings of both references instruct against such combination. This falls far short of a prima facie case of obviousness. Moreover, there is no showing that Benzel, as modified by Saitta, would achieve the results achieved by Applicant's claimed invention.

Bonin ('306) is merely directed to a conventional snorkel apparatus and fails to suggest any combination with an oxygen canister.

Wilen ('237) is directed to a mask which includes a pair of tubes 8 which adopts the conventional approach of utilizing oxygen compressed in a container 27 which may be accessed and submerged to allow the swimmer to remain submerged for longer periods of time. The design is such that the pressure from the container 27 will maintain the snorkel valve 13 closed. This is contrary to Applicant's claimed construction where the claims define the supply tube from the head mounted supply as "communicating supplemental oxygen from the canister to the snorkel device" (Claim 1) "from the oxygen supply bottle to the snorkel device for simultaneously inspiration therefrom by the swimmer along with atmospheric air" (Claim 12, 14, 16 and 17). Since Wilen's objective is to maintain the supply of oxygen stored until submergence, it would be contrary to his invention to provide a system where oxygen and atmospheric air is supplied simultaneously.

The Examiner argues that Benzel defines the construction recited in claim 3. It is noted, however, that claim 3 includes the limitation that the canister be mounted to the head mounting strap and the oxygen be supplied to the snorkel device at a point along the inspiration path for simultaneous inspiration along with atmospheric air. To the contrary, however, Benzel seeks to provide a system with oxygen contained in a tank supported from the user's waist and primarily to sustain life during a dive and only, in some circumstances, inhale some ambient air with most of his inhaled air coming from the demand valve 30 (Column 4, lines 5-7). This is neither Applicant's objective nor claimed construction. It is the oxygen from the canister mounted to the head strap which supplies supplemental oxygen while the user inhales through the snorkel.

Claim 18 calls for the air/oxygen mixture system to mix the oxygen from the canister on the headband on a continuous basis. This would be contrary to Benzel who specifically provides that the flow is to be primarily, mutually exclusive and that, even when there is a momentary opening of both the snorkel and demand valve, "most of his inhaled air will come from the demand valve 30." For Benzel to substitute a small head mounted canister for the tank 23 would be to defeat his objective of providing for all or most of his flow to be oxygen and would lead to quick evacuation of any small volume canister mounted to the head band. Thus, to substitute a small canister for the tank 23 and only supplement air flow would serve to defeat the very objectives of Benzel's and to make such an unsupported substitution is contrary to the well established principles of patent law.

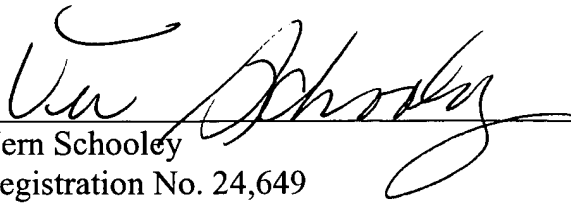
Claim 19 depends from claim 18 and calls for the mixing device to maintain an open passage from the canister to the mouthpiece for unrestricted flow of oxygen, irrespective of the orientation of the swimmer. This is totally contrary to Benzel who restricts his flow by the valve 30. To remove such valve and to provide for unrestricted flow would be to defeat the entire objective of Benzel.

In the foregoing it will be apparent that Applicant has made as significant contribution to the art since it is believed that the claims in this case are patentably distinguished over the art of record and early Notice of Allowance is respectfully solicited.

Respectfully submitted,

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